

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
19 May 2005 (19.05.2005)

PCT

(10) International Publication Number
WO 2005/044838 A2

(51) International Patent Classification⁷:

C07K

(21) International Application Number:

PCT/US2004/034679

(22) International Filing Date: 21 October 2004 (21.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/517,035 3 November 2003 (03.11.2003) US

(71) Applicant (for all designated States except US): GENENCOR INTERNATIONAL, INC. [US/US]; 925 Page Mill Road, Palo Alto, California 94304 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): HARDING, Fiona, A. [US/US]; 772 Lewis Street, Santa Clara, California 95050 (US).

(74) Agent: MACKNIGHT, Kairin, T.; GENENCOR INTERNATIONAL, INC., 925 Page Mill Road, Palo Alto, California 94304 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

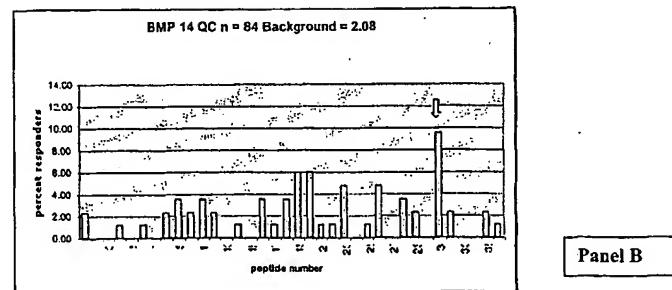
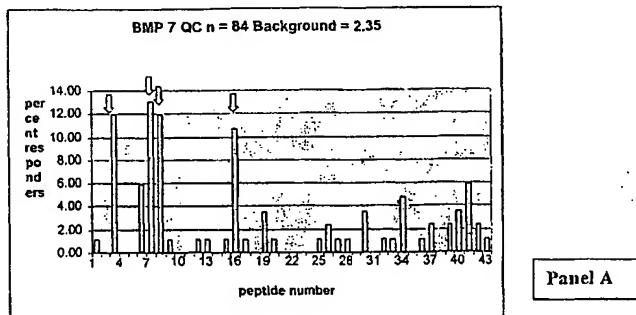
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: CD4+ EPITOPEs OF BONE MORPHOGENETIC PROTEINS



WO 2005/044838 A2

(57) Abstract: ABSTRACT The present invention provides CD4+ T-cell epitopes in bone morphogenetic proteins (BMPs). In particular embodiments, the present invention provides CD4+ T-cell epitopes of BMP-7 and BMP-14. In some preferred embodiments, the present invention provides CD4+ T-cell epitopes of BMP-7 and BMP-14 that are suitable for modification to reduce the immunogenicity of the BMP-7 and BMP-14 proteins.

WO 2005/044838 A2



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Best Available Copy